

REMARKS/ARGUMENTS

This paper is submitted responsive to the Official Action mailed July 13, 2005. Reconsideration of the application in light of the accompanying remarks and amendments is respectfully requested.

In the aforesaid action, the Examiner rejected claims 1-8 as obvious over a combination of US Patent Number 6,332,511 to Parlato et al. (Parlato) and US Patent Number 3,142,354 to Kammerer et al. (Kammerer).

The invention is drawn to a muffler assembly having outer and inner muffler components defining a gap therebetween. Each muffler component is defined by two can or tube elements, and a series of alternating reactive and fiberglass plates and discs respectively. The reactive plates reflect sound which is deadened and transformed into heat as it passes through the fiberglass discs.

According to the invention, the fiberglass discs are free standing discs of fiberglass material (See figures). The discs and plates are preferably mounted into the muffler components under compression (See specification, end of paragraph bridging pages 4-5) to produce proper sound attenuation. Further, a gap between the inner and outer muffler components is preferably selected to be $1/4$ of a wavelength of the sound to be attenuated.

Still further, a cloth and wire assembly is advantageously positioned between the discs and plates and the underlying can/central tube, and extends radially outwardly between end plates (51 in the drawings) and the ends of the discs/plates assembly.

The claims as amended are drawn to these various features, and are submitted to be patentable over the art of record.

Parlato discloses a silencer assembly having inner and outer components which contain "single strand fiberglass acoustic fill material", and Kammerer discloses a single muffler component which has spaced plates which define openings that are "filled with suitable sound material, for example glass wool". The Examiner considers these spaces filled with glass wool to be the same as the fiberglass discs called for by claim 1. Reconsideration of this holding is respectfully requested.

Claim 1 clearly calls for fiberglass discs, and the specification and drawings make clear that these are free standing structures. The discs of the present invention are not merely material filled into gaps after assembly of the other components. Rather, they are free standing disc shaped structures which are assembled in disc form. Based upon the foregoing, it is submitted that claim 1 calling for fiberglass discs is not rendered obvious by Parlato combined with Kammerer.

Claims 2-13 are dependent claims which depend from claim 1 and are believed to be allowable based upon this dependency. These claims are further believed to be allowable in their own right as set forth below.

Claims 3 and 5 call for the sequential positioning of reactive plates and fiberglass discs within the muffler. Nothing in the art of record discloses or suggests the 2-1 sequence of fiberglass discs to reactive plates as claimed. The Examiner indicates this as a mere rearrangement of

parts, but it is submitted that the art of record, if one considers the zones of fiberglass material 7 of Kammerer to be discs, discloses at best a 1 to 1 alternating sequence. Thus, to arrive at the claims of the present invention requires more than rearrangement of parts, but selective doubling of some but not all of the parts. Nothing in the art of record suggests the subject matter of claims 3 and 5.

Claim 6 is drawn to the muffler assembly of the present invention wherein the gap between the inner and outer muffler components is selected to be approximately $1/4$ of the wavelength of noise to be dampened. The Examiner has taken official notice that it is well known to establish a distance or depth in the order of $1/4$ wavelength of the desired frequency to attenuate. While this may be true, such public notice would not suggest the location of this distance as set by the present claims. Specifically, it is submitted that the art of record and "official notice" would not lead a person of skill in the art to establish the gap between muffler components as claimed, particularly since the reactive plates and fiberglass discs are the components believed to be damping the noise and, thus, it would be these components individually, it is submitted, which would be sized according to the official notice taken by the Examiner.

Claims 9-13 are newly added and set forth additional features of the present invention.

Claims 9-11 call for the feature of the present invention wherein a cloth and screen assembly is positioned between the inner can and the plurality of discs and

plates, and wherein the cloth and screen assembly extends between the end plate (51) and the end of the discs/plates. Nothing in the art of record is believed to disclose or suggest this subject matter.

Claim 12 is drawn to the open ended nature of the inner tube of the inner muffler component, which is clearly shown in Figure 2, and which helps to further dampen or otherwise cancel unwanted noise.

Claim 13 is drawn to the feature of the present invention wherein the discs and plates are mounted in compression to obtain desired density. This structure is not disclosed or suggested by the art of record, and clearly is not disclosed or suggested by Kammerer who teaches loose glass fiber in the spaces defined between the plates.

Based upon the foregoing, it is submitted that the claims patentably define over the art of record. Favorable action is therefore respectfully solicited.

An earnest and thorough attempt has been made by the undersigned to resolve the outstanding issues in this case and place same in condition for allowance. If the Examiner has any questions or feels that a telephone or personal interview would be helpful in resolving any outstanding issues which remain in this application after consideration of this amendment, the Examiner is courteously invited to telephone the undersigned and the same would be gratefully appreciated.

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It is submitted that the claims as amended herein patentably define over the art relied on by the Examiner and early allowance of same is courteously solicited.

It is believed that no fee is due in connection with this paper. If, however, any fee is due, please charge same to deposit account no. 02-0184.

Respectfully submitted,
Vishnu M. Sishtla

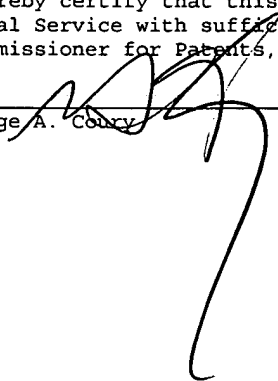
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I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313" on October 13, 2005.


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